

(19) 世界知的所有権機関
国際事務局



20 AUG 2004



(43) 国際公開日
2003 年 8 月 28 日 (28.08.2003)

PCT

(10) 国際公開番号
WO 03/070796 A1

(51) 国際特許分類⁷: C08F 220/56, 226/02,
228/02, 2/00, D21H 17/37, 21/10, 21/18

(21) 国際出願番号: PCT/JP03/01918

(22) 国際出願日: 2003 年 2 月 21 日 (21.02.2003)

(25) 国際出願の言語: 日本語

(26) 国際公開の言語: 日本語

(30) 優先権データ:
特願2002-47116 2002 年 2 月 22 日 (22.02.2002) JP

(71) 出願人 (米国を除く全ての指定国について): 日本
ビー・エム・シー株式会社 (JAPAN PMC CORPO-
RATION) [JP/JP]; 〒101-0021 東京都千代田区外神田
6 丁目 2 番 8 号 Tokyo (JP).

(72) 発明者; および

(75) 発明者/出願人 (米国についてのみ): 清貞 俊次

(KIYOSADA, Toshitsugu) [JP/JP]; 〒267-0056 千葉県
千葉市緑区大野台 2 丁目 3 番 37 号 日本ビー・
エム・シー株式会社内 Chiba (JP). 遠藤 明 (EN-
DOH, Akira) [JP/JP]; 〒982-0826 宮城県仙台市太白区
三神 1-4-1 東北大学職員寮 1 1 2 Miyagi (JP).
岩田 悟 (IWATA, Satoru) [JP/JP]; 〒290-0067 千葉県市
原市八幡海岸通 17 番地 2 日本ビー・エム・シー
株式会社内 Chiba (JP). 小川 正富 (OGAWA, Masatomi)
[JP/JP]; 〒267-0056 千葉県千葉市緑区大野台 2 丁目
3 番 37 号 日本ビー・エム・シー株式会社内 Chiba
(JP).

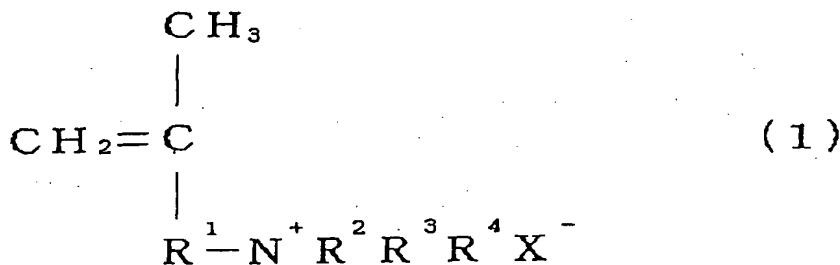
(74) 代理人: 福村 直樹 (FUKUMURA, Naoki); 〒160-0023
東京都新宿区西新宿七丁目 18 番 5 号 中央第 7 西
新宿ビル 401 号 Tokyo (JP).

(81) 指定国 (国内): AE, AG, AL, AM, AT, AU, AZ, BA, BB,
BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK,
DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ,
OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ,

[続葉有]

(54) Title: (METH)ACRYLAMIDE POLYMER, PROCESS FOR PRODUCTION THEREOF, PAPER MAKING CHEMICALS,
PAPERS CONTAINING THE SAME

(54) 発明の名称: (メタ)アクリルアミド系ポリマー、その製造方法、製紙用薬品、及びそれを含有する紙



(57) Abstract: A novel (meth)acrylamide polymer capable of forming paper making chemicals which exhibit excellent paper-strengthening, drainage-improving, yield-improving, interlaminar strength enhancing, surface strength enhancing, sizing-improving effects in acid, neutral, or alkaline paper-making systems; a process for production thereof; and papers made by using the polymer and being excellent in burst strength, internal bond strength and other characteristics. The (meth)acrylamide polymer is characterized by being obtained by polymerizing (a) a monomer represented by the general formula (1) with (b) (meth)acrylamide and (c) an ionic monomer exclusive of the monomers represented by the general formula (1).

[続葉有]

WO 03/070796 A1

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/JP03/01918

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl.⁷ C08F220/56, C08F226/02, C08F228/02, C08F2/00, D21H17/37,
D21H21/10, D21H21/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.⁷ C08F220/56, C08F226/02, C08F228/02, C08F2/00, D21H17/37,
D21H21/10, D21H21/18

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
CA (STN), REGISTRY (STN)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 56-82809 A (AGFA Gevaert AG.), 06 July, 1981 (06.07.81), & EP 29168 A1 & DE 2946465 A & US 4334013 A & CA 1165497 A	1, 3, 7
Y	JP 2000-160499 A (Japan PMC Corp.), 13 June, 2000 (13.06.00), Claims; Par. Nos. [0014] to [0022], [0027] to [0040], [0046] to [0049] (Family: none)	1-11
Y	JP 8-333427 A (Arakawa Chemical Industries, Ltd.), 17 December, 1996 (17.12.96), Claims; Par. Nos. [0007] to [0009] (Family: none)	1-11

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
22 May, 2003 (22.05.03)Date of mailing of the international search report
03 June, 2003 (03.06.03)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/JP03/01918

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 9-13297 A (Japan PMC Corp.), 14 January, 1997 (14.01.97), Claims; Par. Nos. [0015], [0038], [0039] (Family: none)	7-11
Y	JP 7-109692 A (Japan PMC Corp.), 25 April, 1995 (25.04.95), Claims; Par. No. [0014] (Family: none)	7-11